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10/671,905	09/29/2003	Naoki Hashimoto	040447-0252	1546

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EXAMINER	
LAZARO, DAVID R	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/671,905	HASHIMOTO ET AL.	
	Examiner	Art Unit	
	David Lazaro	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :09/29/2003, 03/29/2004 and 02/09/2006.

DETAILED ACTION

1. Claims 1-23 are pending in this office action.

Priority

2. This application claims priority to Japanese Patent Application 2002-350064 filed 12/02/2002.

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. The drawings filed 09/29/2003 are accepted by the examiner.

Information Disclosure Statement

5. The information disclosure statements (IDS) submitted on 09/29/2003, 03/29/2004 and 02/09/2006 have been considered by the examiner.

Claim Objections

6. Claims 2 and 13 are objected to because of the following informalities: The term "OSI" should be spelled out at least once to clearly identify the intended meaning. Appropriate correction is required.

7. Claims 12 and 19 are objected to because of the following informalities: In claim 19, both instances of "have not receive" should be "have not received". Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1, 4, 9, 12 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 1 recites the limitation "said packet allocated said packet identification information" in lines 4-5 of the claim. There is insufficient antecedent basis for this limitation in the claim. While the means for adding packet identification information are claimed, there is no explicit action claimed of allocating the identification information. The examiner suggests simply changing "said packet allocated" to "a packet allocated".

11. Claim 4 also recites the limitation "said packet allocated said packet identification information". There is insufficient antecedent basis for this limitation in the claim as discussed above.

12. Claim 9 recites the limitation "said packet to be transmitted is transmitted while bypassing said packet identification information addition means and said transmission means" (emphasis added). It is not clear as to how the packet can bypass the transmission means when it is being transmitted. For this office action, the examiner

will interpret the packet as only bypassing the packet identification information addition means.

13. Claims 12 and 19 both include the term "same packets". It is not clear what applicant is intending to claim with the use of the "same" description. The use of "same" with packets would indicate that a previous packet was identified such that the "same" acts as a reference to the identified packet(s). As there is no previous mention of packets in the claims to which the "same" descriptor could refer, it is not clear the meaning of "same packets". For the purpose of examination on the merits, the examiner will interpret "same packets" as duplicate packets.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1, 3-6, 8, 9, 11, 12, 14, 15, 16, 18, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,112,323 by Meizlik et al. (Meizlik).

16. With respect to claim 1, Meizlik teaches a packet transmission system comprising:

packet identification information addition means for adding packet identification information to a packet to be transmitted (Col. 12 lines 22-26, Col. 28 lines 1-4: packet sequence number for each packet); and

transmission means for transmitting said packet allocated said packet identification information a plurality of times even if the packet transmission system does not receive a retransmission request from a reception side (Col. 28 line 49 - Col. 28 line 16: means for retransmitting a packet periodically if no ACK is received)

17. With respect to claim 3, Meizlik further teaches wherein said packet is any one of a multicast packet and a broadcast packet (Col. 7 lines 60-62: multicast protocol used)

18. With respect to claim 4, Meizlik further teaches said transmission means transmits said packet allocated said packet identification information and a redundant packet which is a duplicate of said packet allocated said packet identification information (Col. 27 line 66 - Col. 28 line 14 and Col. 28 lines 49-65: packets are transmitted and if unacknowledged, the a duplicate of the unacknowledged packet is retransmitted; also Col. 12 line 64 - Col. 13 line 23: transmitted packets may be retransmitted based on NACK messages sent to the sender).

19. With respect to claim 5, Meizlik further teaches said packet identification information addition means adds one said packet identification information to each of a plurality of packets to be transmitted (Col. 12 lines 22-26, Col. 28 lines 1-4: packet sequence number for each packet).

20. With respect to claim 6, Meizlik further teaches reception means for receiving information on a simultaneous packet loss frequency at the reception side per certain period, wherein said transmission means changes a transmission parameter based on said information on the simultaneous packet loss frequency (Col. 15 lines 19-24: system measures network packet loss rate and adjusts the transmission rate based on

the packet loss rate; and Col. 16 lines 4-13: network packet loss rate can be measured based on information received regarding packet loss frequency (NAKs)).

21. With respect to claim 8, Meizlik further teaches means for retransmitting said packet if the packet transmission system does not receive an acknowledgement of transmission of said packet (Col. 28 lines 49-64: unacknowledged packets are retransmitted).

22. With respect to claim 9, Meizlik further teaches determination means for determining whether information equal in type to the packet identification information to be added by the packet identification information addition means is already added to said packet to be transmitted, wherein if a determination result of said determination means is positive, said packet to be transmitted is transmitted while bypassing said packet identification information addition means and said transmission means. (Col. 27 line 66 - Col. 28 line 14; Col. 28 lines 49-65; Col. 12 line 64 - Col. 13 line 23: This is inherent in the retransmission of a packet, whether unacknowledged or indicated as missing in a NAK. The retransmitted packets have to have the same sequence number as the original lost packet, otherwise the received would not be able to determine if the lost packet was retransmitted.)

23. Claim 11 is rejected based on at least the logic of the rejection of claim 1. Also see Col. 6 lines 55-67 and Col. 2 lines 5-12 in relation to servers and conferencing.

24. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

25. Claims 12 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,574,770 by Daudelin et al. (Daudelin).

26. With respect to claim 12, Daudelin teaches a packet reception system comprising:

reception means capable of receiving same packets allocated packet identification information once or a plurality of times without a retransmission request (Col. 2 lines 48 - Col. 3 line 4 and Col. 6 lines 46-64: endpoint can receive duplicate packets based on retransmissions that are not requested - sender timeout with retry);

determination means for determining whether the reception means receives the same packets allocated said packet identification information the plurality of times or not (Col. 2 lines 48 - Col. 3 line 4 and Col. 5 lines 30-37 : receiver can determine duplicates based on packet identification information); and

discard means for leaving only one of the same packets and discarding the other packets if a determination result of said determination means is positive (Col. 2 lines 48 - Col. 3 line 4 and Col. 5 lines 30-37: discards duplicates if packet already received).

27. With respect to claim 14, Daudelin further teaches each of said packets is any one of a multicast packet and a broadcast packet (Col. 7 lines 64 - Col. 8 line 10).

28. With respect to claim 15, Daudelin further teaches each of said packets includes a plurality of higher level packets (Col. 4 lines 1-8 and Col. 6 lines 1-17: packets contain higher level packets - higher link levels/layers).

29. With respect to claim 18, Daudelin further teaches response means for transmitting an acknowledgment to a sender when said packets are received (Col. 8 lines 57-67).

30. With respect to claim 21, Daudelin further teaches a wired LAN terminal (Col. 3 lines 17-49)

Claim Rejections - 35 USC § 103

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

32. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,112,323 by Meizlik et al. (Meizlik) in view of U.S. Patent 6,032,197 by Birdwell et al. (Birdwell).

33. With respect to claim 2, Meizlik teaches all the limitations of claim 1, but does note explicitly disclose compression means for deleting a header of a third OSI layer and a header of a fourth OSI layer of the packet to be transmitted, and making data of a

fifth OSI layer carried on a second OSI layer before adding the packet identification information to the packet to be transmitted.

Birdwell teaches a packet header compression technique that allows one to selective compress packet headers by removing select headers from the packet (Col. 8 lines 57-67). This can include headers from the third OSI layer and the fourth OSI layer (In Birdwell: Col. 5 lines 21-30: IP (third) and UDP (fourth) headers for example).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Meizlik and modify it as indicated by Birdwell such that it further comprises means for deleting a header of a third OSI layer and a header of a fourth OSI layer of the packet to be transmitted, and making data of a fifth OSI layer carried on a second OSI layer before adding the packet identification information to the packet to be transmitted. One would be motivated to have this, as it is desirable to improve transmission efficiency through packet compression techniques, including removing particular portions of the packet (In Birdwell: Col. 1 lines 32-43).

34. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,112,323 by Meizlik et al. (Meizlik) in view of U.S. patent 6,188,691 by Barkai et al. (Barkai).

35. With respect to claim 7, Meizlik teaches all the limitations of claim 1, and further teaches the use of multicast transmission through IP multicast for example (In Meizlik: Col. 7 lines 60-62).

Meizlik does not explicitly disclose said transmission means transmits said packet allocated said packet identification information, with a MAC (Media Access Control) address common to a plurality of reception devices set as a destination address. Barkai teaches transmission of data through multicast transmission, such as IP multicast, can be accomplished through the use of a MAC address common to a plurality of reception devices (In Barkai: Col. 4 lines 5-59, particularly lines 12-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made, to take the system disclosed by Meizlik and modify it as indicated by Barkai such that said transmission means transmits said packet allocated said packet identification information, with a MAC (Media Access Control) address common to a plurality of reception devices set as a destination address. One would be motivated to have this, as it is desirable to be able to associate particular multicast traffic with a common MAC address for network efficiency and easy administration (In Barkai: Col. 2 lines 4-34 and lines 62-67).

36. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,112,323 by Meizlik et al. (Meizlik) in view of U.S. Patent 6,577,609 by Sharony (Sharony).

37. With respect to claim 10, Meizlik teaches at least all the limitations of claims 1, 3-6, 8, 9, and further teaches that the invention can be practiced in commonplace networking environments (In Meizlik: Col. 6 lines 55-67).

Meizlik does not explicitly disclose the environment of a wireless LAN base station. Sharony teaches that a common environment for multicast data transmissions includes a wireless LAN including a base station or access point (In Sharony: Abstract and Col. 1lines 18-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Meizlik and modify it as indicated by Sharony such that a wireless LAN base station comprises the packet transmission system. One would be motivated to have this, as the advantages of Meizlik's system (In Meizlik: Col. 2 lines 29-63) apply to common networking environments (In Meizlik: Col. 6 lines 55-67) and would therefore extend to a wireless LAN environment including a base station.

38. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,574,770 by Daudelin et al. (Daudelin) in view of U.S. Patent 6,032,197 by Birdwell et al. (Birdwell).

39. With respect to claim 13, Daudelin teaches all the limitations of claim 1, but does note explicitly disclose each of said packets received has a structure in which data of a fifth OSI layer is directly carried on a second OSI layer, and the packet reception system further comprises restoration means for restoring a header of a third OSI layer and a header of a fourth OSI layer of each of said packets received.

Birdwell teaches a packet header compression technique that allows one to selective compress packet headers by removing select headers from the packet (Col. 8

lines 57-67). This can include headers from the third OSI layer and the fourth OSI layer (In Birdwell: Col. 5 lines 21-30: IP (third) and UDP (fourth) headers for example). The headers will be restored on the receiving end (Col. 9 lines 18-24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Daudelin and modify it as indicated by Birdwell such that it further comprises each of said packets received has a structure in which data of a fifth OSI layer is directly carried on a second OSI layer, and the packet reception system further comprises restoration means for restoring a header of a third OSI layer and a header of a fourth OSI layer of each of said packets received. One would be motivated to have this, as it is desirable to improve transmission efficiency through packet compression techniques, including removing particular portions of the packet (In Birdwell: Col. 1 lines 32-43).

40. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,574,770 by Daudelin et al. (Daudelin) in view of U.S. Patent 5,793,976 by Chen et al. (Chen).

41. With respect to claim 16, Daudelin teaches all the limitations of claim 12, but does note explicitly disclose counting means for counting a simultaneous packet loss frequency per certain period and transmission means for transmitting information on said simultaneous packet loss frequency.

Qaddoura teaches counting means for counting a simultaneous packet loss frequency per certain period and transmission means for transmitting information on said simultaneous packet loss frequency (Col. 9 lines 15-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Daudelin and modify it as indicated by Qaddoura such that it further comprises counting means for counting a simultaneous packet loss frequency per certain period and transmission means for transmitting information on said simultaneous packet loss frequency. One would be motivated to have this, as there is need for collecting information related to performance monitoring in network systems (In Chen: Col. 4 lines 20-39).

42. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,574,770 by Daudelin et al. (Daudelin) in view of U.S. patent 6,188,691 by Barkai et al. (Barkai).

43. With respect to claim 7, Daudelin teaches all the limitations of claim 12, but does not explicitly disclose said transmission means transmits said packet allocated said packet identification information, with a MAC (Media Access Control) address common to a plurality of reception devices set as a destination address.

Barkai teaches transmission of data through can be accomplished through the use of a MAC address common to a plurality of reception devices (In Barkai: Col. 4 lines 5-59, particularly lines 12-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made, to take the system disclosed by Daudelin and modify it as indicated by Barkai such that said transmission means transmits said packet allocated said packet identification information, with a MAC (Media Access Control) address common to a plurality of reception devices set as a destination address. One would be motivated to have this, as it is desirable to be able to associate particular traffic with a common MAC address for network efficiency and easy administration (In Barkai: Col. 2 lines 4-34 and lines 62-67).

44. Claim 19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,574,770 by Daudelin et al. (Daudelin) in view of U.S. Patent 6,646,987 by Qaddoura (Qaddoura).

45. With respect to claim 19, Daudelin teaches all the limitations of claim 12, and further teaches detection means for detecting whether said reception means have received the same packets at least one or have not receive the same packets at all (Col. 2 lines 48 - Col. 3 line 4 and Col. 5 lines 30-37: receiver can determine duplicates based on packet identification information), and means for causing a plurality of higher level packets to be included in a packet to be transmitted (Col. 4 lines 1-8 and Col. 6 lines 1-17: packets contain higher level packets - higher link levels/layers).

Daudelin does not explicitly disclose the transmission being based on a frequency with which said reception means have not received the same packets at all.

Qaddoura teaches increasing the packet size based on the frequency of errors (i.e. - less errors mean less retransmissions and less duplicate packets) (Col. 7 lines 22-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Daudelin and modify it as indicated by Qaddoura such that it further comprises means for causing a plurality of higher level packets to be included in a packet to be transmitted based on the frequency with which said reception means have not received the same packets at all. One would be motivated to have this, as it provides for a higher throughput (In Qaddoura: Col. 7 lines 29-30).

46. With respect to claim 23, Daudelin further teaches a wired LAN terminal (In Daudelin: Col. 3 lines 17-49)

47. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daudelin in view of U.S. Patent 6,577,609 by Sharony (Sharony).

48. With respect to claim 10, Daudelin teaches at least all the limitations of claims 12 and 18, and further teaches that the invention can be practiced in commonplace networking environments such as LAN networks (Col. 3 lines 17-49).

Daudelin does not explicitly disclose the environment of a wireless LAN terminal. Sharony teaches that a common environment for data transmissions includes a wireless LAN including a base station or access point (In Sharony: Abstract and Col. 1lines 18-34 and Col. 7 lines 21-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Daudelin and modify it as indicated by Sharony such that a wireless LAN terminal comprises the packet reception system. One would be motivated to have this, as the advantages of Daudelin's system (In Daudelin: Col. 2 lines 18-25) apply to common networking environments such as LAN environments (In Daudelin: Col. 3 lines 17-49) and would therefore extend to a wireless LAN terminal environment.

49. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daudelin in view of Qaddoura as applied to claim 19 above, and further in view of Sharony.

50. With respect to claim 22, Daudelin in view of Qaddoura teaches all the limitations of claim 19, a and further teaches that the invention can be practiced in commonplace networking environments such as LAN networks (Col. 3 lines 17-49).

Daudelin in view of Qaddoura does not explicitly disclose the environment of a wireless LAN terminal. Sharony teaches that a common environment for data transmissions includes a wireless LAN including a base station or access point (In Sharony: Abstract and Col. 1lines 18-34 and Col. 7 lines 21-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Daudelin in view of Qaddoura and modify it as indicated by Sharony such that a wireless LAN terminal comprises the packet transmission and reception system. One would be motivated to have this, as the advantages of Daudelin's system (In Daudelin: Col. 2 lines 18-25) apply to common

networking environments such as LAN environments (In Daudelin: Col. 3 lines 17-49) and would therefore extend to a wireless LAN terminal environment.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 571-272-3986. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Lazaro
June 21, 2007